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(for discussion at 3-31 Wkshp)

PGE's Informal Comments on
OPUC Staff Draft Rule
Incremental Costs
Division 083
Renewable Portfolio Standards
March 16, 2009

OAR 860-083-00XX

**Incremental Cost of Compliance for Electric Companies
and Electricity Service Suppliers [ORS 469A.100(4)]**

[This rule applies to electric companies subject to ORS 469A.052 and electricity service suppliers subject to ORS 469A.065.]

[These definitions are in staff's draft rule on compliance reports:]

- “**Banked renewable energy certificate**” has the meaning given that term in ORS 469A.005(1).
- “**Bundled renewable energy certificate**” has the meaning given that term in ORS 469A.005(3).
- “**Commission**” means the Public Utility Commission of Oregon.
- “**Renewable energy source**” has the meaning given that term in ORS 469A.005(10).
- “**Retail electricity consumer**” has the meaning given that term in ORS 469A.005(11).
- “**Unbundled renewable energy certificate**” has the meaning given that term in ORS 469A.005(12).

[Definitions to be added to OAR 860-083-0005]

“**Aggregate costs**” means all costs included in ORS 469A.100(4)(d) and (e) and those transmission costs included in 469A.100(4)(c) that can reasonably serve more than one generating facility. Aggregate costs also include physical or financial costs for assets to replace interruptions of generation or deliveries of qualifying electricity, short-term electricity that is not qualifying, or electricity from proxy plants. Aggregate costs may include demonstrable opportunity costs.

“**Amortization**” means spreading the initial capital costs of long-term qualifying electricity or a proxy plant at the discount rate over an initial amortization period. For replacement costs for qualifying electricity, amortization means spreading such replacement costs at the discount rate over the remainder of the current amortization period for the associated qualifying electricity. For significant investments in facilities producing qualifying electricity, amortization means spreading such significant investment costs and the remaining unamortized investment of the facility at the discount rate over the expected useful life of the facility.

“**Applicable filing for an electric company**” means an implementation plan under ORS 469A.075, a filing for a change to rates for retail electricity consumers that includes costs of qualifying electricity in rates for the first time, or a compliance report under ORS 469A.170. Applicable filing does not include filings to change rates before 2011.

“**Applicable filing for an electricity service supplier**” means a compliance report under ORS 469A.170.

“**Cost limit for an electric company**” has the meaning given that term in ORS 469A.100.

“**Cost limit for an electricity service supplier**” under ORS 469A.100(6) means four (4) percent of the weighted average of the average retail revenues per megawatt-hour of the electric

companies subject to ORS 469A.052 in whose service areas the electricity service supplier sells electricity in a compliance year. The weights are the retail sales by the electricity service supplier in the service areas of electric companies subject to ORS 469A.052 in the compliance year.

“Discount rate” means the nominal after-tax marginal weighted-average cost of capital from the most recent integrated resource plan for which the commission has issued a final order.

“Extended amortization period” means the period or periods after an initial amortization period where a facility will continue to provide qualifying electricity.

“Incremental cost of compliance” has the meaning given that term in ORS 469A.100(4).

“Initial amortization period for an electric company” means the amortization period for new long-term qualifying electricity or a corresponding proxy plant established in the beginning year of new long-term qualifying electricity. The length of the amortization period is the term of the agreement if the qualifying electricity is acquired through a contract. For facilities owned by an electric company and the proxy plant, the amortization period is based on the electric company’s most recent depreciation study approved by the commission for the type of generating facility.

“Initial amortization period for an electricity service supplier” for facilities that produce qualifying electricity means a period based on the expected useful lifetime of the facility. For proxy plants for an electricity service supplier initial amortization period means the period for a proxy plant used by the electric company subject to ORS 469A.052 in whose service area it made the most retail sales over the five calendar years preceding the compliance year.

“Interruptions of generation or deliveries” include, but are not limited to, planned and unplanned generating and transmission facility outages, natural gas delivery interruptions, and reduced generation due to weather.

“Levelized cost” for long-term qualifying electricity and a proxy plant means the present value of amortized capital costs and all other costs amortized at the discount rate over the time horizon of the qualifying electricity or proxy plant. Levelized cost also includes an estimate of the net present value of costs and benefits for the qualifying electricity and the corresponding proxy plant likely to occur after the end of the applicable time horizon, amortized over the time horizon at the discount rate. For short-term qualifying electricity, levelized cost means costs levelized over the term of the contract. For short term non-qualifying electricity, levelized cost means costs levelized over a term consistent with the term of the contract for qualifying electricity.

“Long-term qualifying electricity” means electricity from facilities owned by an electric company or electricity service supplier that generate qualifying electricity and electricity from contracts of five years or more to purchase qualifying electricity.

“New qualifying electricity for an electric company” means qualifying electricity [when where](#) the costs are first included in an applicable filing for a compliance year. New qualifying electricity can be from new generating facilities, generating facilities with significant investments, or new contracts to purchase electricity.

“New qualifying electricity for an electricity service supplier” means qualifying electricity from new generating facilities, generating facilities with significant investments, or new contracts to purchase electricity that the supplier plans to use to serve customers of electric companies subject to ORS 469A.052 and are first operational in a compliance year.

“Proxy plant” means, unless otherwise specified by the commission, a base-load combined-cycle natural gas-fired generating facility that is used to estimate the costs of non-qualifying electricity corresponding to new long-term qualifying electricity with the same beginning

amortization year.

“**Qualifying electricity**” has the meaning given that term in ORS 469A.005(9).

“**Replacement costs**” means capital costs that have the effect of replacing initial capital costs for long-term qualifying electricity or proxy plants.

“**Short-term qualifying electricity**” means electricity from contracts of less than five years to purchase qualifying electricity.

“**Significant investments**” means investments in a compliance year that increase the efficiency, capacity, available qualifying electricity, or remaining useful life of a generating facility, that if amortized over the remainder of the amortization period and combined with cost changes associated with such investments would increase the levelized cost of the facility by more than [10] percent. [Specific percentage should be a presumption departure from which may be justified based on the particular facts and circumstances].

“**Specific costs**” means the costs for electricity plus the costs for transmission delivery and substations that can reasonably serve only a single generating facility or contract.

“**Time horizon**” for long-term qualifying electricity or a proxy plant means its amortization period or the period from the beginning year of its amortization period to 20 years after the current compliance year, whichever results in a shorter period.

- (1) For amortization and levelization calculations an electric company should use the discount rate set forth in the most recently issued commission order for the electric company’s integrated resource plan if the order specified such a rate [what if no rate is set in the IRP order?]. For amortization and levelization calculations an electricity service supplier should use the discount rate of the electric company in whose service area it made the most retail sales over the five calendar years preceding the compliance year.
 - (a) The incremental cost of compliance under ORS 469A.100(4) for long-term qualifying electricity is the difference between the levelized annual cost of qualifying electricity delivered in a compliance year and an equivalent amount of electricity delivered from the corresponding proxy plant.
 - (b) The incremental cost of compliance under ORS 469A.100(4) for short-term qualifying electricity is the difference between the levelized annual cost of qualifying electricity delivered in a compliance year and an equivalent amount of delivered market purchases with a consistent term that is not qualifying electricity. The cost of non-qualifying electricity should be based on published prices for the appropriate electricity trading hub. Specific costs must be adjusted for differences in transmission costs.
 - (c) Levelized annual delivered costs for qualifying electricity and non-qualifying electricity are specific costs plus applicable shares of aggregate costs.
 - (d) Incremental costs are deemed zero for qualifying electricity from generating facilities or contracts that became operational before June 6, 2007.
- (2) Each electric company must forecast the cost of long-term qualifying electricity in the following manner:
 - (a) For each source of qualifying electricity the electric company must estimate the delivered cost of qualifying electricity for each year over the time horizon of the qualifying electricity. The delivered cost includes:
 - (A) Capital, operating and maintenance costs of generating facilities, and
 - (B) Financing costs attributable to capital, operating and maintenance expenditures for generating facilities. Capital costs must be amortized.

- (b) The levelized annual cost of qualifying electricity delivered in the compliance year must be based on all costs that will be included in rates through its time horizon.
 - (c) Aggregate costs must be estimated as the incremental cost to the utility system for all qualifying electricity.
 - (d) Aggregate transmission costs must be allocated proportionately to existing and planned generating facilities that will reasonably be served by the transmission facilities.
- (3) Each electricity service supplier must forecast the cost of long-term qualifying electricity it plans to use to serve the service areas of an electric company subject to ORS 469A.052 consistent with section 2 of this rule.
- (4) Updates of amortization periods are required for compliance reports and implementation plans in the following circumstances:
- (a) If investment costs in a compliance year are significant for a generation facility whose costs were previously included in a compliance report, all qualifying electricity from the facility should be treated as is new qualifying electricity under this rule with an amortization period based on the expected remaining useful life of the facility. Cost for such facility should be updated in the next compliance report and implementation plan.
 - (b) If investment costs in a compliance year for a generation facility whose costs were previously included in a compliance report are not significant, the amortization period of the associated facility should be unchanged and no update is required.
 - (c) If a generating facility produces qualifying electricity after all capital costs have been amortized, the electric company should update the next compliance report and implementation plan to establish an extended amortization period. The extended amortization period should be based on expected remaining useful life of the facility. Qualifying electricity from the facility should be treated in the same manner as a new qualifying electricity under sections 1, 2, 5, and 10 of this rule. Additional extended amortization periods may be added.
 - (d) Each electricity service supplier must update amortization periods for long-term qualifying electricity it plans to use to serve the service areas of an electric company subject to ORS 469A.052 consistent with subsections 4(a) through 4(c) of this rule.
- (5) For each compliance year, except as specified in subsections 10(a) and 10(b) of this rule, if using new long term qualifying electricity in a compliance year to comply with ORS 469A.052, each electric company must establish a new proxy plant to estimate the cost of non-qualifying electricity corresponding to new long-term qualifying electricity with the same beginning amortization year in the following manner:
- (a) Each electric company must provide for each new proxy plant the estimated heat rate, availability factor, operation and maintenance costs per megawatt-hour, annualized replacement costs per megawatt-hour, and initial capital costs per megawatt based on recently built combined-cycle plants [What is “recently?” What if the plant is not recently built? What proxy would be used? Why limiting to a CCCT? – See PGE comments dated January 30, 2009]. Adjustments must be made for price escalation or de-escalation based on the initial year of the proxy plant. Adjustments may be made for locational cost differences. Adjustments may be based on applicable construction cost indexes or other published sources. Planned replacement capital costs for proxy plants must be represented as an equivalent annual operation and maintenance cost. Initial capital costs must be

amortized.

- (b) Each electric company must estimate the amortized initial capital costs, operation and maintenance costs including fuel and annualized replacement costs, availability factor, heat rate and other elements of the proxy plant that affect its costs for each year of the time horizon of the proxy plant. Estimates must account for expected degradation of the heat rate, capacity and other elements affecting costs. Forecasts of fuel prices must include cost adders based on current regulation of greenhouse gas emissions or such regulations that are reasonably expected to be implemented in the relevant time frame.
 - (c) Each electric company must allocate aggregate costs for proxy plants in a manner consistent with the allocation of aggregate costs for qualifying electricity.
 - (d) Aggregate and specific costs for each proxy plant must be levelized over its time horizon.
 - (e) The average cost per megawatt-hour for each year of a proxy plant's time horizon is the levelized cost in subsection 5(d) of this rule divided by the expected base-load electricity of the proxy plant for that year.
 - (f) The cost of equivalent non-qualifying electricity is the estimated average cost per megawatt-hour of the proxy plant for each year multiplied by the amount of corresponding long-term qualifying electricity that was produced, or is expected to be produced, in each year of its time horizon.
 - (g) If corresponding long-term qualifying electricity is produced or is planned to be produced after a proxy plant's initial amortization period, a new amortization period for the qualifying electricity should be established based on the expected remaining useful life of the generating facility. The remaining unamortized investment for the facility associated with the qualifying electricity should be amortized over the new amortization period. [[If the long-term qualifying electricity is generated after the initial amortization period, wouldn't the unamortized investment be zero? What would remain to further amortize?]] Qualifying electricity from the facility should be treated in the same manner as new qualifying electricity under sections 1, 2 and 10 and subsections 5(a) through 5(f) of this rule.
 - (h) Each electricity service supplier must forecast the cost of proxy plants consistent with subsections 5(a) to 5(g) of this rule for plants corresponding to long-term qualifying electricity it plans to use to serve the service areas of an electric company subject to ORS 469A.052.
- (6) To the extent practical, forecasts of fuel prices in implementation plans described in ORS 469A.075 should be consistent with the most recent forecast in avoided cost proceedings pursuant to ORS 758.525(1) and integrated resource planning pursuant to commission orders. Forecasts of fuel costs for each new proxy plant by electric companies and electricity service suppliers must use one of the following methods at the beginning of year of the new proxy plant:
- (a) Proxy plant fuel prices may be based on financially firm, long-term fixed prices for natural gas for the period such contracts are available. After such period, the method in subsection 6(b) of this rule should be used.
 - (b) Proxy plant fuel prices may be based on forecasts of spot prices for fuel at an appropriate market trading hub or hubs plus an estimate of hedging costs to largely eliminate fuel price risk for the time horizon of such plant.
 - (c) Fuel costs for long-term qualifying electricity from biomass sources specified in ORS 469A.025(2) must be forecast in a manner consistent with subsections 6(a) or 6(b) of this

rule.

- (7)(a) In the next applicable filing each electric company or electricity service supplier must update incremental cost estimates based upon discovery of a significant error.
- (b) If fuel prices for a proxy plant or biomass plant were forecasted based on the method in subsection 6(b) of this rule, an electric company must update plant costs for actual spot fuel prices in each implementation plan.
- (c) If fuel prices are updated as described in subsection 7(b) of this rule, actual fuel costs must include hedging costs as described in subsection 6(b) of this rule.
- (d) For the period fuel prices for a proxy plant or biomass plant were forecasted based on the method in subsection 6(a) of this rule, fuel costs are not updated.
- ~~(e) In each implementation plan an electric company must update cost estimates for actual qualifying electricity.~~
- ~~(f) In compliance reports each electric company should use forecasts for the amounts of qualifying electricity and fuel costs from the most recently filed implementation plan unless subsection 8(a) of this rule applies.~~
- (g) Electricity service supplier compliance reports should include updated estimates of the incremental cost of long-term qualifying electricity at least every two years consistent with subsections 7(b) through 7(e) of this rule for qualifying electricity it plans to use to serve the service areas of an electric company subject to ORS 469A.052.
- (8) If the sum of the incremental cost of compliance, the costs of unbundled renewable energy certificates and alternative compliance payments to comply with the applicable renewable portfolio standard for a compliance year is estimated to exceed the applicable cost limit, the electric company or electricity service supplier must review the methodologies used to estimate the levelized costs of proxy plants and long-term qualifying electricity. If systematic errors are discovered, such errors must be corrected in estimates of the incremental cost of compliance in compliance reports and implementation plans.
- (9) If an electric company's implementation plan under ORS 469A.075 forecasts that the incremental cost of compliance, [the costs of unbundled renewable energy certificates and alternative compliance payments to comply with the applicable renewable portfolio standard for a compliance year](#) is expected to exceed the cost limit specified in OAR 860-083-XXX [*compliance standards for electric companies*] for any compliance year covered by the implementation plan, the electric company must review the methodologies used to estimate the levelized costs of proxy plants and long-term qualifying electricity. If systematic errors are discovered, such errors must be corrected in estimates of the incremental cost of compliance in compliance reports and implementation plans.
- (10)(a) If new long-term qualifying electricity in a compliance year, including qualifying electricity treated in the same manner as new qualifying electricity in subsections 4(c) and 5(g) of this rule, totals less than [20] megawatts of capacity, the incremental cost of compliance for such long term qualifying electricity is not required to be included in compliance reports or implementation plans, unless section 8 of the rule applies. Such long-term qualifying electricity may be included in the compliance report for purposes of determining compliance with the applicable renewable portfolio standard under ORS 469A.052 or ORS 469A.065.

Comment [P1]: Sections (e) and (f) belong in the respective rules relating to each topic and do not belong in the incremental cost rule.

- (b) When the capacity of qualifying electricity described in subsection 10(a) of this rule equals or exceeds [20] megawatts in a compliance year or the cumulative capacity of qualifying electricity in subsection 10(a) of this rule exceeds [50] megawatts, the incremental cost of compliance of all such qualifying electricity must be included in the compliance report for the compliance year and in compliance reports and implementation plans filed after such compliance report..
- (c) The amortization periods for qualifying electricity in subsections 10(a) and 10(b) of this rule should begin at the same time as such qualifying electricity with the latest operational date. Costs must be adjusted for price escalation or de-escalation based on the beginning amortization year and actual initial years for such qualifying electricity. Adjustments may be based on applicable construction costs indexes or other published sources.
- (d) A new proxy plant with the same beginning amortization year as the qualifying electricity in subsection 10(c) of this rule should be used to estimate the non-qualifying costs corresponding to such qualifying electricity.